

AMENDMENTS TO THE CLAIMS:

Please amend the claims as follows:

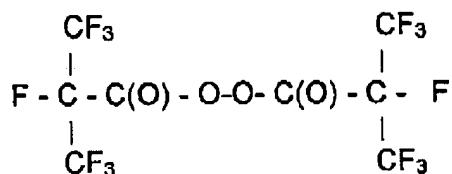
1. (Withdrawn)

2. (Currently Amended) A polymerization process of one or more fluorinated monomers wherein the perfluorodiacylperoxides according to claim 1 are used as polymerization initiators;

wherein said perfluorodiacyl peroxides meet the following condition: the thermal decomposition constants K_d (sec⁻¹) in the presence of water do not undergo substantial variations with respect to the thermal decomposition constants in absence of water.

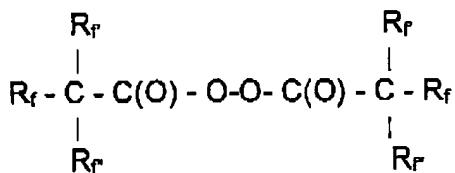
3. (Original) A polymerization process according to claim 2, wherein the polymerization is carried out in aqueous medium, in suspension, in emulsion or in microemulsion.

4. (Previously Amended) A polymerization process according to claim 2, wherein at temperatures of the order of 50° - 80°C, the perfluorodiacylperoxides of structure (C) or the compound of structure (A) having the formula:



are used.

5. (Previously Amended) A polymerization process according to claim 2, wherein at temperatures of the order of -20° - +25°C, the perfluorodiacylperoxides of structure (A) of formula:



are used, wherein when R_f is $-\text{CF}_3$, R_f and R_f are $\text{C}_1\text{-C}_3$ linear or branched perfluoroxyalkyl groups.

6. (Previously Amended) A polymerization process according to claim 2, wherein the fluorinated monomers are selected from:

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- $\text{C}_2\text{-C}_8$ perfluoroolefins, such as ~~tetrafluoroethylene (TFE), hexafluoropropene (HFP)~~;
- $\text{C}_2\text{-C}_8$ hydrogenated fluoroolefins, such as ~~vinyl fluoride (VF), vinylidene fluoride (VDF), trifluoroethylene, $\text{CH}_2=\text{CH-R}_f$, perfluoroalkylethylene, wherein R_f is a $\text{C}_4\text{-C}_8$ perfluoroalkyl, hexafluoroisobutene~~;
- $\text{C}_2\text{-C}_8$ chloro-fluoroolefins, such as ~~chlorotrifluoroethylene (CTFE)~~;
- $\text{CF}_2=\text{CFOR}_f$ (per)fluoroalkylvinylethers (PAVE), wherein R_f is a $\text{C}_1\text{-C}_6$ (per)fluoroalkyl, for example CF_3 , C_2F_5 , C_3F_7 ;
- $\text{CF}_2=\text{CFOX}$ (per)fluoro-oxyalkylvinylethers, wherein X is: a $\text{C}_1\text{-C}_{12}$ alkyl, or a $\text{C}_1\text{-C}_{12}$ oxyalkyl, or a $\text{C}_1\text{-C}_{12}$ (per)fluoroxyalkyl having one or more ether groups;
- perfluorodioxoles, such as ~~2,2,4-trifluoro-5-trifluoromethoxy-1,3-dioxole (TFD), 2,2-bis-trifluoromethyl-4,5-difluoro-dioxole (PPD)~~;

- sulphonic monomers, such as $\text{CF}_3=\text{CFOCF}_2\text{CF}_2\text{SO}_2\text{F}$;
- fluorinated dienes such as $\text{CF}_3=\text{CFOCF}_2\text{CF}_2\text{CF}=\text{CF}_2$,
 $\text{CF}_2=\text{CFOCCl}_2\text{CF}_2\text{CF}=\text{CF}_2$, $\text{CF}_2=\text{CFOCF}_2\text{OCF}=\text{CF}_2$, $\text{CF}_2=\text{CFOCF}_2\text{OCCI}=\text{CF}_2$,
 $\text{CF}_2=\text{CFOC}(\text{CF}_3)_2\text{OCF}=\text{CF}_2$.

7. (Previously Amended) A polymerization process according to claim 2, wherein the perfluorodiacylperoxide initiator is fed in a continuous way or by a single addition at the starting of the polymerization.

8. (Previously Amended) A polymerization process according to claim 2, wherein the amount of perfluorodiacylperoxide initiator is in the range 0.0001% - 5% by moles with respect to the amount of the fed monomers.

9. (New) A polymerization process according to claim 6, wherein the C₂-C₈ perfluoroolefins are selected from the group consisting of tetrafluoroethylene (TFE) and hexafluoropropene (HFP).

10. (New) A polymerization process according to claim 6, wherein the C₂-C₈ hydrogenated fluoroolefins are selected from the group consisting of vinyl fluoride (VF), vinylidene fluoride (VDF), trifluoroethylene, $\text{CH}_2=\text{CH}-\text{R}_f$ perfluoroalkylethylene, wherein R_f is a C₁-C₆ perfluoroalkyl, and hexafluoroisobutene.

11. (New) A polymerization process according to claim 6, wherein the C₂-C₈ chloro-fluorolefins are chlorotrifluoroethylene (CTFE).

12. (New) A polymerization process according to claim 6, wherein for the CF₂=CFOR_f (per)fluoroalkylvinylethers (PAVE), wherein R_f is a C₁-C₆ (per)fluoroalkyl, the C₁-C₆ (per)fluoroalkyl is selected from the group consisting of CF₃, C₂F₅ and C₃F₇.

13. (New) A polymerization process according to claim 6, wherein the perfluorodioxoles are selected from the group consisting of 2,2,4-trifluoro-5-trifluoromethoxy-1,3-dioxole (TTD) and 2,2-bis-trifluoromethyl-4,5-difluoro-dioxole (PPD).

14. (New) A polymerization process according to claim 6, wherein the sulphonic monomers are CF₂=CFOCF₂CF₂SO₂F.

15. (New) A polymerization process according to claim 6, wherein the fluorinated dienes are selected from the group consisting of CF₂=CFOCF₂CF₂CF=CF₂, CF₂=CFOCCI₂CF₂CF=CF₂, CF₂=CFOCF₂OCF=CF₂, CF₂=CFOCF₂OCCl=CF₂, and CF₂=CFOC(CF₃)₂OCF=CF₂.